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PATENT

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Title: APPARATUS AND METHOD FOR EXTRACTING DATA VALUES
FROM A SIGNAL ENCODED WITH AES3 DATA

MARKED-UP VERSION OF CLAIMS SHOWING CHANGES MADE

1. (Once Amended) Apparatus for determining nominal pulse duration values in a signal encoded with an AES3 data stream of data pulses, at least some of which comprise one of one bit cells, two bit cells and three bit cells, the apparatus comprising:

 a first circuit for measuring duration of each pulse of the signal and providing a sequence of duration values, and

 a second circuit for detecting a maximum duration value from the sequence of duration values provided by the first circuit, the maximum duration value corresponding to duration of three bit cells, and providing first and second duration values corresponding to one bit cell and two bit cells respectively.

2. (Once Amended) Apparatus according to claim 1, wherein the second circuit [includes] comprises a downcounter and a comparator for detecting the maximum duration value and a lookup table for providing the first and second duration values.

3. (Once Amended) Apparatus according to claim 1, [including] further comprising a third circuit for receiving the maximum duration value and the first and second duration values and comparing the measured duration value of each pulse with the maximum duration value, the first duration value and the second[a third] duration value and providing a corresponding output.

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4. (Once Amended) Apparatus for extracting sample data values from a signal encoded with an AES3 data stream of data pulses at least some of which comprise one of a half pulse, a whole pulse, or a wide pulse, the apparatus comprising:

a first circuit for measuring duration of each pulse of the signal and providing a sequence of duration values, and

a second circuit for receiving at least one nominal pulse duration value, corresponding to nominal duration of one of a half pulse, a whole pulse, or a wide pulse[a predetermined number of bit cells], and comparing the [measured] duration value of a pulse measured by the first circuit with at least one nominal pulse duration value to determine the duration of the pulse of the signal relative to the nominal pulse duration value.

5. (Once Amended) Apparatus according to claim 4, wherein the second circuit receives three nominal duration values, corresponding to nominal durations of a half pulse comprising one bit cell, a whole pulse comprising two bit cells and a wide pulse comprising three bit cells respectively, compares each measured duration value with at least one of the nominal duration values, and provides an output depending on the comparison.

6. (Once Amended) Apparatus according to claim 5, wherein the second circuit [has] comprises first, second and third outputs, which it asserts depending on whether the measured duration value corresponds to[matches] one bit cell, two bit cells or three bit cells in nominal duration, and the apparatus further comprises a means for extracting sample data values based on the outputs of the second circuit.

7. (Once Amended) A method for determining nominal pulse duration values in a signal encoded with an AES3 data stream of data pulses, at least some of which comprise one of one bit cells, two bit cells and three bit cells, the method comprising:

measuring duration of each pulse of the signal and providing a sequence of duration values, and

detecting a maximum duration value from the sequence of duration values, the maximum duration value corresponding to duration of three bit cells, and providing first and second duration values corresponding to one bit cell and two bit cells respectively.

8. (Once Amended) A method according to claim 7, including receiving the maximum duration value and the first and second duration values and comparing the measured duration value of each pulse with the maximum duration value, the first duration value and [a third] the second duration value and providing a corresponding output.

9. (Once Amended) A method for extracting sample data values from a signal encoded with an AES3 data stream of data pulses, at least some of which comprise one of a half pulse, a whole pulse, or a wide pulse, the method comprising:

measuring duration of each pulse of the signal and providing a sequence of duration values,

receiving at least one nominal pulse duration value, corresponding to nominal duration of one of a half pulse, a whole pulse, or a wide pulse[a predetermined number of bit cells], and

comparing the measured duration value with at least one nominal pulse duration value to determine the duration of the pulse relative to the nominal pulse duration value.